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LECTOTYPIFICATION AND EPITYPIFICATION OF *Morella cerifera* (L.) Small (MYRICACEAE)

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RESUMEN

Se establece la tipificación formal de *Morella cerifera* (L.) Small (*Myrica cerifera* L.). Se escoge un lectótipo y un epitipo luego del estudio de los elementos del protólogo.

Palabras clave. *Morella*, *Myrica*, Myricaceae, tipificación.

ABSTRACT

The formal typification of *Morella cerifera* (L.) Small (*Myrica cerifera* L.) was established. A lectotype and an epitype werw selected after the study of protologue's elemens.

Key words. *Morella*, *Myrica*, Myricaceae, typification.

During the past three years, the old problem of the adequate typification of *Myrica* L. (Myricaceae) has been debated and finally solved. Due to the fact that the proposal of Verdcourt & Polhill (1997) to preserve the names *Myrica* L. and *Gale* Duhamel with new types was rejected by the Committee for Spermatophyta (Brummitt 1999), most of the species of *Myrica* must be transfered to *Morella* Lour. Adequate explanations regarding the use of *Morella* to receive the species of *Myrica*, and a summary of the history of this nomenclatural problem can be found in Baird (1968) and Wilbur (1994).

Morella cerifera (L.) Small (=*Myrica cerifera* L.) is a species that grows from southern New Jersey to southern Florida in North America, Central America, Mexico, West Indies, and Bermuda (Chevalier 1901, Elias 1971, Bornstein 1997). Even though Small (1903) had already transferred *Myrica cerifera* to *Morella*, he did not mention the type for this species. According to the International Code of Botanical Nomenclature (Greuter et al. 2000), the type of the old name (*Myrica cerifera* L.) must be conserved as the type of the new name (*Morella cerifera* (L.) Small). Nevertheless, no one has designated a proper lectotype for the name *Myrica cerifera* L.

In order to choose the adequate lectotype for *Morella cerifera*, it must be taken into account that the original delimitation made by Linnaeus (1753) of *Myrica cerifera*, includes some elements in the protologue which currently are considered to belong to a different species. The Catesby plate (t. 13) cited and described by Linnaeus as "ß" variety of *Myrica cerifera*, is now recognized as *Myrica pensylvanica* Loisel (Howard & Staples, 1983). The sheet deposited in Linnaeus Herbarium (Herb. Linn. 1169.2) annotated as 'cerifera', is also recognized as *Myrica pensylvanica* (C. Jarvis, pers. comm.). It is clear that neither of these two elements can be selected as the lectotype for *Morella cerifera*.

In the protologue of *Myrica cerifera*, Linnaeus cited two plates: "Pluk. alm. 250 t. 48 f. 9" and "Catesb. car. I. p. 69 t. 69". These two plates (especially the last one, according to Howard & Staples (1983)) are good representatives of what is presently known as *Morella* (*Myrica*) *cerifera*. Nevertheless, in the protologue Linnaeus also cited some references ("Hort. Cliff. 455" and "Gron. Virg. 120") that are supported by herbarium specimens. As the specimes are well conserved and properly deposited in an adequate herbarium, and they were first cited in the protologue, I prefer to choose the lectotype among these herbarium specimens rather than the plates.

The reference "Roy. lugdb. 527", also included in the protologue, makes reference to A. van Royen's "Florae leydensis prodromus" published in 1740. Most of A. van Royen's collections are deposited in L but, there are not any sheets of *Myrica cerifera* related to A. van Royen's collections in L (S. Kofman, pers. comm.).

The specimens that support the references "Hort. Cliff. 455" and "Gron. Virg. 120", cited by Linnaeus, include a Clifford sheet (455) (Clifford's herbarium) and a Clayton sheet (692) (Clayton's Herbarium), both deposited in BM. The Clifford's sheet seems to be the first sample that should be chosen as a lectotype, due to the presence of reproductive structures. But, after having examined this sheet closely, I consider that the shape of the leaves on Clifford's sheet must be first analyzed in detail. When observing Clifford's sheet I found that some of the leaves have the characteristic shape of those of *Myrica heterophylla* Raf., as pointed out by Elias (1971). Although, according to Elias, this species is considered by some researchers as a hybrid between *M. cerifera* and *M. pensilvanica*, the useful characters Elias points out to identify *M. heterophylla* are: "blackish branches, pilose leafy branchlets; glabrous young fruits (characters I have observed as being also present in *M. cerifera*) and coriaceous, evergreen, elliptic to obovate leaves". In Clifford's sheet, although some leaves (especially those on the right branch from above) present the oblanceolate feature (characteristic of *M. cerifera*), many others could fall within the range of variation cited by Elias for the leaves of *M. heterophylla*. By contrast, in Clayton's sheet the leaves show the typical shape of those of *M. cerifera* (oblanceolate).

Regarding the reproductive features, the problem is that vegetative characters, and not reproductive ones, are used as diagnostic to separate species of *Morella* close to *Morella cerifera*. Even though the Clifford's sheet has catkins in an intermediate state of development (perhaps they are male inflorescences), the characteristics of the flowers in these *Morella* species are very similar.

Considering the importance given to vegetative morphology in *M. cerifera* and among the species close to it, and to avoid confusion when the lectotype of *M. pensilvanica* is selected in the future, I choose Clayton's sheet (692) as the lectotype of *M. cerifera*.

Due to the analysis above and to the fact that Clayton's sheet is sterile, it is convenient to select an epitype, as recommended by the International Code of Botanical Nomenclature (Greuter et al. 2000). The sheet collected by Palmer in Gloucester County (where Clayton frequently collected), and studied by Baird (1968) and by Bornstein (1997) seems to be the most appropiate selection. So, the formal typification of *Morella cerifera* is:

Morella cerifera (L.) Small, Fl. SE U.S. 337, 1329. 1903. *Myrica cerifera* L., Sp. Pl., 1024. 1753.–Lectotype (designated here): "Virginia", *Clayton 692* (BM!). – Epitype (designated here): United States of America, Virginia, New

Gloucester, Gloucester County, "thickets along stream, sandy and marly soil", 11 Apr 1932, *E. J. Palmer 39776* (NY!; iso-A).

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